

22 April 2005

RESPONSE TO COMMENTS
20 and 21 October 2005 MEETING OF THE REGIONAL BOARD

LINCOLN CENTER ENVIRONMENTAL REMEDIATION TRUST
GROUNDWATER TREATMENT SYSTEM
SAN JOAQUIN COUNTY

TENTATIVE WASTE DISCHARGE REQUIREMENTS ORDER
AND TIME SCHEDULE ORDER
NPDES NO. CA0084255

A tentative Waste Discharge Requirements (WDRs) Order, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0084255 and tentative Time Schedule Order (TSO) for the Lincoln Center Environmental Remediation Trust, Groundwater Treatment System (Discharger) in San Joaquin County were circulated to known interested parties for review and comment on 7 January 2005 and were noticed for public comment. Comments on the proposed action were due by 15 February 2005. Comments on the tentative Orders were received from the Discharger. On 17 March 2005 a revised tentative TSO which incorporated comments from the Discharger was circulated to known interested parties for review and comment. Comments on this revised tentative TSO were due on 15 April 2005. No comments were received for the revised tentative TSO. The Regional Board will include in the administrative record for this matter the written comments submitted by the Discharger. A full copy of the comments from the Discharger is included with the agenda package. These comments (paraphrased), and staff responses to these comments, are summarized below:

Lincoln Center Environmental Remediation Trust (Discharger) Comments

Comment #1:

Alternative use or disposal of groundwater treatment system discharges, and costly additional treatment, is not provided for in the court-approved interim remedial action plan, nor has it been found to be feasible:

The Discharger commented that achieving the “unnecessarily stringent” discharge requirements described in the proposed Orders appears infeasible. The Discharger commented that it appears that any modifications required to meet the new limits would, at a minimum, be tremendously costly and likely require the use of significant amounts of additional property than the trust has rights to use, and there does not appear to be any feasible and cost-effective alternatives available for disposition of the groundwater produced by the groundwater treatment system.

The Discharger provided the following preliminary information regarding potential disposal options:

Sanitary Sewer: “Discharge to the City of Stockton POTW could potentially be utilized by the Trust... This type of long-term discharge permit has not been approved previously by the

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City and is unlikely to be approved... Based on recent discussions with the City, the costs of a connection fee and use fee (based on volume) would be on the order of \$42,000 per month or \$500,000 per year for the current discharge of 240 gallons per minute. If the Trust proceeds and implements a dual-phase extraction system in the source area of the Site, resulting in an increase of discharge to 800 gallons per minute, the fees charged by the City rise to \$112,000 per month and a corresponding \$1,344,000 per year. Clearly these costs are prohibitive in as much as the annual discharge fees would surpass the total capital costs of implementation.”

Calaveras River Discharge: “The Trust investigated storm water sewer routes to an alternative discharge location to surface waters. While an alternative storm water discharge route has been identified, it would require the Trust to install conveyance piping in the City of Stockton and the County of San Joaquin right of way, a distance of over 4,000 feet to the southeast, to the Calaveras River. Directing the treated groundwater to the Calaveras River would be immensely costly, and present no real benefit to water quality.”

Reuse: Regarding reuse of the discharged groundwater, the Trust “considered the reuse of discharged water for landscape irrigation and groundwater recharge... However, because the Site is an operating shopping center, consisting of buildings and vast parking lots, there is a very limited amount of landscaped space at the Site relative to the quantity of water that is being generated from the remedial activities. It is unlikely that landscaping at the Site could use the entire volume of treated water. Additionally, the risk of failure or breakthrough at the treatment system may be unacceptable for this type of application.”

Reinjection: “Reinjection was also considered utilizing such techniques as reinjection wells, infiltration galleries, or trenches to return treated water back to the subsurface... However, there are significant technical limitations associated with reinjection, such as scaling and biofouling of the reinjection equipment and the formation adjacent to the well, gallery, or trench, which could cause reduced effectiveness relatively quickly (within months). The Trust determined that reinjection was infeasible, as there would be substantial problems at the Site associated with the location of dozens of injection wells that would be required.”

Response:

The Clean Water Act mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law. (33 U.S.C., § 1311(b)(1)(C); 40 C.F.R., § 122.44(d)(1); *see also American Iron & Steel Institute v. EPA* (D.C. Cir. 1997) 115 F.3d 979, 990 (“[NPDES] permits must incorporate discharge limits necessary to ensure that . . . water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants.”). The Regional Board must implement the CWC consistent with the CWA. The CWA precludes the consideration of costs when developing effluent limitations for NPDES permits necessary to implement water quality standards. *See, e.g., Ackels v. EPA* (9th Cir. 1993) 7 F.3d 862, 865-66; *City of Burbank v. State Water Resources Control Board*, 35 Cal. 4th 613 (2005).

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Pursuant to 40 C.F.R. section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that “*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute* to an excursion above any state water quality standard, including state narrative criteria for water quality.” [Emphasis added.] Staff applied the beneficial uses and associated effluent limitations considering the best available information and in accordance with the Basin Plan and CWA. With the exception of the sanitary sewer disposal option, no other costs associated with any other alternative were provided by the Discharger. The proposed Orders allow the Discharger sufficient time to further pursue modification of previously considered alternatives or variations of other compliance alternatives.

Comment #2:

Permit Provisions are inconsistent with the mandates of California Law requiring consideration of multiple factors and broader water quality concerns:

The Discharger commented that: “Although required under Water Code section 13263(a), the Regional Board failed to consider the required factors contained in Water Code section 13241 during the process of developing the effluent limits contained in the Draft Permit. The Regional Board has omitted any discussion of the substantial economic costs and minimal benefits of the new proposed restrictions in the Draft Permit, as well as their broader environmental impacts and indirect costs... The Draft permit further does not address the present and probable future beneficial uses realistically relevant to the reach of the Slough most affected by the discharge, or conditions that can reasonably be achieved through the coordinated control of factors affecting water quality in the Slough and the Delta. In addition, improper designation of beneficial uses and the subsequent application of relevant objectives in NPDES permits, basing the permit on guidance criteria not contained in the Basin Plan and ignoring costs and other factors in section 13241 also violates the broad mandates of Water Code section 13000.”

Response:

The Regional Board staff has considered the factors specified in CWC Section 13263, including considering the provisions of CWC Section 13241 where appropriate. All of the effluent limitations in the Draft permit are water quality based effluent limitations that are based on federally approved water quality standards. In implementing the federal standards, the State may not consider economics.

Comment #3:

Constituents merely passing through from ambient groundwater, to the extent they are not caused or increased by the treatment system, should not be regulated as “pollutants” under the Clean Water Act:

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The Discharger commented that the constituents that the Regional Board has proposed to “stringently regulate” naturally occur in groundwater, and are not waste products created by human or industrial processes. The Discharger commented that as a result, these constituents are not “pollutants” as defined under the CWA, citing as an example the Ninth Circuit Court of Appeals ruling in *Association to Protect Hammersly, Eld & Totten Inlets v. Taylor Resources* (APHETI-9th Cir. 2002).

Response:

The discharge consists of pumped groundwater treated via air stripping and granular activated carbon to remove VOC’s, therefore the effluent retains the inorganic salts and trace metal characteristics of the groundwater. The discharge from the groundwater treatment system is a point source discharge to surface water, associated with human activities that can be controlled. In a later case, the Ninth Circuit Court of Appeals found in *Northern Plains Resource Council v. Fidelity Exploration and Development Company* (Northern Plains-9th Cir. 2003), that “Pollution” is the “man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water” and the discharge of unaltered groundwater to a waters of the U.S., which alters the quality of that water, causes “pollution”. The court found that “The requirement that the physical, biological, or chemical integrity of the water be a “man-induced” alteration refers to the affect of the discharge on the receiving water; it does not require that the discharged water be altered by man.” The Court noted that “APHETI cannot sensibly be read to require human transformation of all materials identified in the CWA definition of “pollutant”... It is the introduction of these contaminants, not their transformation by humans, that renders them pollutants. Also, by allowing the degradation of the quality of receiving waters, the consequences of Fidelity’s interpretation of APHETI would upset the integrity of the CWA, a result that APHETI was careful to avoid.” Considering this information, the groundwater constituents that are naturally occurring should be considered pollutants subject to limitations under this proposed Order.

Comment #4:

The automatic designation of the MUN Beneficial Use is contrary to Federal and State law

The Discharger commented that the Regional Board’s automatic application of the MUN beneficial use to the Slough, by reading Footnote 8 out of Table II-1 of the Basin Plan, is contrary to federal and state law requirements regarding the appropriate method for designating beneficial uses, and would constitute the unlawful application of an underground regulation. Due to the weak hydrologic connection between the Trust’s minimal discharge and flows to the San Joaquin River, the establishment of effluent limitations for protection of a non-existent MUN beneficial use in the Slough is unnecessary and inappropriate for this discharge of treated groundwater. As applied to this discharge, the limitations imposed will not likely provide any meaningful protection for drinking water supplies pumped out of the Delta at least 18 miles away.

Response:

Effluent from the treatment unit is discharged to the storm sewer system that is owned and operated by San Joaquin County. The storm sewer system discharges to the Fourteen Mile Slough. Fourteen

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Mile Slough is part of the Sacramento-San Joaquin Delta (Delta). The beneficial uses of the Delta as identified in Table II-1 of the Basin Plan include domestic and municipal supply (MUN). Many of the new effluent limitations in the proposed Order are a result of the MUN beneficial use and application of the chemical constituents objective.

As noted in State Water Resources Control Board (SWRCB) Resolution No. 88-63, all surface waters of the State are considered to be suitable, or potentially suitable, for municipal or domestic water supply. Some exceptions are related to water quality and supply. The Regional Board could legally dedesignate a use, if appropriate, only in compliance with EPA's water quality standards regulations. The Regional Board must assure that any changes in beneficial use designations for waters of the State are consistent with all applicable regulations adopted by the Environmental Protection Agency. To dedesignate, the Regional Board has to adhere to prescribed public participation requirements as well as demonstrate that the use does not exist and cannot feasibly be attained under one of six conditions specified in the regulations. And, under state law, a basin plan amendment is the appropriate vehicle to designate and dedesignate uses. As noted in the SWRCB's Water Quality Order 2002-0015, Vacaville's Easterly Wastewater Treatment Plant (at page 14) "A decision on a waterbody's uses applies to the waterbody as a whole, rather than to a specific permittee. Beneficial use decisions are, thus, more appropriately made in a basin planning, rather than a permit, action."

In considering application of the MUN use, Regional Board staff notes that limited information is available regarding water flows and quality in Fourteen Mile Slough at the point of discharge. As noted during a site visit by Regional Board staff, there are periods of limited or no flow at the point of discharge. Downstream, the discharge contributes directly to increasing volumes of water in Fourteen Mile Slough which are under tidal influence. What dilution and/or assimilative capacity may be available immediately or further downstream is unknown.

Fourteen Mile Slough is part of the Delta system, and the discharge contributes pollutants to the Delta. The point of discharge from the groundwater treatment plant to Fourteen Mile Slough is within the legal boundary of the Delta, and MUN is an existing use of the Delta. Although drinking water intakes are not currently in close proximity to the point of discharge, increasing population in the Central Valley and Stockton urban area will substantially increase the demands for drinking water. In January 2003 the City of Stockton published a Feasibility Report in support of the Delta Water Supply Project. This Project is designed to provide additional water supplies to meet the projected demands of the City of Stockton Metropolitan Area. In this Feasibility Report the City of Stockton evaluated four potential intake sites for key environmental issues including fisheries, land use, biological resources, and cultural resources. Each intake location went through a preliminary design and operations evaluation that included screening requirements, water quality, and maintenance issues. The environmental evaluation found no substantial, "fatal flaw" in land use or biological constraints affecting the four surface water diversion points. These four potential intake locations included the southwest tip of Empire Tract, the Little Connection Slough, Honker Cut, and the western tip of Wright Tract at the confluence of the Fourteen Mile Slough and the San Joaquin River.

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While the intake site at the confluence of Fourteen Mile Slough and the San Joaquin River may not be selected as part of this process, this effort does demonstrate that waters in proximity to the discharge are considered suitable for the MUN use and may be used for such use in the future. Regional Board staff has considered this information, and determined that any consideration to dedesignate Delta waters is not a reasonable alternative.

Comment #5:

General comments on sufficiency of monitoring data

The Discharger commented that: “The Trust is concerned with the Regional Board’s insistence on developing effluent limits based upon a very small data set of monitoring data available for most of the constituents of concern... Instead of developing effluent limits with such a limited data set, the Regional Board should defer new effluent limits until additional monitoring data for both the effluent and appropriate ambient receiving water can be obtained. The imposition of effluent limits in the absence of sufficient data could create anti-backsliding issues for the Trust’s project in the future.”

Response:

As noted in the proposed Order, for priority pollutants a Reasonable Potential Analysis (RPA) was conducted in accordance with either the SIP or the *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001) (TSD). The USEPA adopted the NTR and the CTR, which contains water quality standards applicable to this discharge and the SIP contains guidance on implementation of the NTR and CTR. Section 1.3 of the SIP requires a water quality based effluent limitation when the maximum effluent concentration (MEC) or observed maximum receiving water background concentration (B) of a priority pollutant exceeds an appropriate CTR/NTR pollutant criterion or more stringent criterion as described in Section 1.1 of the SIP. When considering other pollutant criteria outside the CTR/NTR and scope of the SIP, the Regional Board has considered that the TSD recommends a water quality-based effluent limit when the projected MEC exceeds an applicable and appropriate pollutant criterion.

In this instance, while the data set was limited, the MEC’s or maximum receiving water background concentrations of all pollutants for which effluent limitations were established exceeded an applicable criterion prior to the application of the statistical multiplier. While a larger data set would likely reduce the uncertainty, and associated maximum *projected* MEC, it would likely result in a higher actual observed MEC.

Comment #6

Basin Plan Objectives

The Discharger commented that: “The Trust first notes that the effluent limits for arsenic are based solely on objectives to protect an MUN use of the Slough... The MDEL limit based on the Table III-1 objective is inappropriate given indisputable evidence of the invalidity of the Table III-1 objective of 0.01 mg/l.... an Appendix to the 1975 Water Quality Control Plan, the document which

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contained the first table of chemical constituent objectives adopted under CWA Section 303, contains clear evidence that the arsenic water quality objective contained in Table III-1 was intended to be set at 0.1 mg/l instead of 0.01 mg/l. The error in the objective has been copied in successive versions of the Basin Plan ever since... Furthermore, as in the case of arsenic, there is evidence that the Table III-1 barium objective of 0.1 mg/l is an error, and should actually match the MCL of 1 mg/l. The evidence suggests that the 0.1 mg/l objective was an error carried over from the Interim Basin Plan and in fact the objective adopted in 1975 was supposed to be listed as 1 mg/l.”

Response:

The Basin Plan Table 111-1 at page III-3.00 establishes Trace Element Water Quality Objectives for arsenic, barium, iron, and manganese that apply to waters in the Delta. These objectives are expressed as maximum dissolved concentrations. Considering these objectives, and monitoring data provided by the Discharger, the proposed Order includes effluent limitations for arsenic, barium, iron, and manganese.

The Discharger commented that the existing arsenic and barium water quality objectives are not appropriate because their original adoption in 1975 was essentially a clerical error and that the Board really intended to adopt a different objective. Regional Board NPDES Staff coordinated discussion of these issues with Regional Board Basin Planning Staff, and disagrees with this conclusion. The arsenic objective that was adopted by the Regional Board in 1975 was based on previous Basin Plan objectives, guidance from State Board, consideration of available technical information, consideration of existing water quality policies including Resolution 68-16, staff recommendations and stakeholder input. There is no reason to conclude that the 0.01 mg/l objective that was included in the Basin Plan in 1975 was somehow a mistake.

The Delta Plan adopted by the Regional Board in 1967 included a 0.01 mg/l objective for arsenic. The rationale, as explained in the Plan, was that this objective was appropriate because it was being met in the Delta and that this objective would protect beneficial uses. The 1971 Interim Plan objective for arsenic was 0.01 mg/l. State Board Guidance issued in 1973 recommended 0.01 mg/l for arsenic for both protection of aquatic life and drinking water. An Appendix to the 1975 Basin Plan included a staff recommendation to change the 0.01mg/l objective to 0.1 mg/l. (The appendix is confusing because it says that the 1971 Plan objective was 0.1 mg/l and really it was 0.01 mg/l) As is the case today, the Regional Board does not always adopt the staff recommendations. A cursory review of the existing record indicates that some stakeholders (i.e., Sacramento County for example) were concerned that the proposed objectives for inorganic chemicals (excluding copper and iron) were too high because the objectives were far above existing background. At the hearing in 1975, the Regional Board adopted the Basin Plan and an addendum to the Basin Plan. The addendum included late revisions to the Basin Plan that were developed in response to testimony received at the hearing and written comments received before and after the public hearing. Included in the addendum was the 0.01 mg/l arsenic objective. There is no doubt that the Regional Board meant to adopt 0.01 mg/l as the arsenic objective.

The situation for barium is similar to arsenic. The Delta Plan and the Interim Basin Plan included an objective of 0.1 mg/l. An Appendix to the 1975 Basin Plan included a staff recommendation to

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change the objective. The addendum (essentially late revisions) to the draft Basin Plan included the 0.1 mg/l barium objective. The addendum was adopted by the Regional Board in response to testimony received at the hearing and written comments. There is no evidence to support the conclusion that the 0.1 mg/l barium objective was a clerical error or a mistake.

Comment #6:
Arsenic

Regarding Arsenic, the Discharger also commented that: "The Trust first notes that the effluent limits for arsenic are based solely on objectives to protect an MUN use of the Slough... the AMEL based upon the U.S. EPA's maximum contaminant level ("MCL") is also inappropriate, because the Office of Administrative Law has previously disapproved the use of U.S. EPA MCLs not specified in the Basin Plan. The federal MCL also is not otherwise appropriate for use via the narrative chemical constituents objective."

Response:

This proposed Order includes an average monthly effluent limitation (AMEL) for arsenic (total recoverable). At page III-3.00 the Basin Plan Chemical Constituents Objective states: "To protect all beneficial uses the Regional Water Board may apply limits more stringent than MCLs." At page III-8.00 the Basin Plan Toxicity Objective states: "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life". The Basin Plan further states: "The Regional Water Board will also consider all material and relevant information submitted by the discharger and other interested parties and numerical criteria and guidelines for toxic substances developed by the State Water Board, the California Office of Environmental Health Hazard Assessment, the California Department of Health Services, the U.S. Food and Drug Administration, the National Academy of Sciences, the U.S. Environmental Protection Agency, and other appropriate organizations to evaluate compliance with this objective."

On January 22, 2001 the U.S. EPA adopted a new standard for arsenic. Public water systems must comply with the 10 µg/L MCL beginning January 23, 2006. After publishing the final arsenic rule on January 22, 2001, U.S. EPA postponed the effective date of the rule until February 22, 2002, requested public comment on the standard, and began reviewing the new standard, the science, costs and benefits analyses that supported the regulation. As announced by the Administrator on 31 October 2001, U.S. EPA will not further postpone the January 2001 rule, and U.S. EPA also does not expect to take any other additional action relative to the July 2001 proposal in the interim (April 17, 2002 Federal Register notice, 67 FR 19030, footnote 3 of Table III-2 at 19037). Reports and recommendations on the science, cost of compliance, and benefits analyses in support of the 10 µg/L final arsenic in drinking water rule were made available for review and public comment until October 31, 2001. These reports were prepared by independent, expert panels convened by the National Academy of Sciences, the National Drinking Water Advisory Council, and the U.S. EPA Science Advisory Board.

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The current DHS Primary MCL for arsenic identified in Title 22 of the California Code of Regulations is 50 µg/L. By federal law, MCLs established by DHS must be at least as stringent as the federal MCL if one exists. The California Health and Safety Code Section 116361 required the Department of Health Services to adopt a new drinking water standard for arsenic by 30 June 2004. Meeting that date was not possible because a Public Health Goal (PHG) was unavailable. In April 2004, the California Office of Environmental Health Hazard Assessment (OEHHA) established a PHG for arsenic of 0.004 µg/L. The PHG is based on risks associated with cancers of the lung and urinary bladder. State law requires DHS to establish an MCL for arsenic at a level as close as technically and economically feasible to the PHG.

Considering; the MUN beneficial use, the chemical constituents and toxicity objectives of the Basin Plan, information from the National Academy of Sciences, the National Drinking Water Advisory Council, the U.S. EPA Science Advisory Board, the California Office of Environmental Health Hazard Assessment, results of effluent and receiving water monitoring, and the fact that the DHS MCL must be at least as stringent as the federal MCL, the opinion of Regional Board Staff is that the 10 µg/L concentration (total recoverable) is an appropriate effluent limitation.

Comment #7:

Consideration of Secondary Maximum Contaminant Levels (MCL's) in Establishing Effluent Limitations

The Discharger commented that MCL's referenced by the chemical constituents objective apply to public water systems (i.e. water suppliers) and are intended only to apply to drinking water treatment facilities at the tap or point-of-use, not as receiving water objectives. The Discharger commented that it is unnecessary and inappropriate to impose end-of-pipe effluent limits based on the recommended levels based solely on consideration of these non-binding taste and odor requirements.

Response:

The proposed Order includes effluent limitations for iron, manganese, and specific conductance considering the MUN beneficial use and secondary MCL's from the Basin Plan chemical constituents objective. For waters designated as MUN, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed MCL's prescribed by the California Code of Regulations Title 22 (CCR Title 22), which are incorporated by reference in the Basin Plan. These include secondary MCL's. The Basin Plan notes that this incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. The Basin Plan further states that, to protect all beneficial uses, the Regional Board may apply limits more stringent than MCLs. As noted previously, there are periods of limited or no flow at the point of discharge to Fourteen Mile Slough. Previous State Water Resources Control Board (SWRCB) Orders including Water Quality Order 2002-0015, Vacaville's Easterly Wastewater Treatment Plant (at pages 53 and 54) have found that use of secondary MCLs in establishing effluent limitations is appropriate.

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The Discharger also commented that the Regional Board incorrectly applied the secondary MCLs as total objectives instead of dissolved objectives, as the water will undergo federally mandated treatment. The U.S. EPA's document "Technical Notes on Drinking Water Methods" (EPA-600/R-94-173) notes that for the most common spectrochemical analytical techniques used for compliance measurements of metals, samples must not be filtered prior to either sample digestion or direct analysis. While municipal use of surface water normally requires treatment pursuant to state and federal Safe Drinking Water Acts, domestic use may not. A water delivery system that serves a single household is not regulated under these statutes. Therefore, it cannot be assumed that domestic use of water will involve treatment, such as particulate removal. Furthermore, to assume that water will be treated prior to use has the effect of transferring the cost of treatment from the discharger of waste to the user of water, which cannot be supported by state law.

Relative to the effluent limitation for specific conductance, the Discharger commented that specific conductance is addressed in (CCR Title 22) Table 64449-B in terms of a range of values for recommended, upper, and short term levels, and that Section 64449 (f) specifically provides that "[f]or constituents shown on Table 64449-B, no fixed consumer acceptance levels have been established." The Discharger commented that the table describes 900 micromhos as a "recommended" level, 1,600 micromhos as an "upper" level, and 2,200 micromhos as a "short term" level, and that neither existing nor new services are required by regulation to be lower than the 1,600 micromhos "upper" level. Regional Board staff notes, however, that Section 64449 (f) (2) also states that "Constituent concentrations ranging to the Upper contaminant level are acceptable if it is neither reasonable nor feasible to provide more suitable waters." Use of the upper or short term level in this instance again shifts the burden of what is reasonable or feasible from the discharger of waste to the user of water.

Comment #8:
MTBE

The Discharger commented that the proposed MTBE effluent limit of 5 µg/l should be eliminated—that Finding 42 of the Draft Order expressly recognizes that the discharge does not have reasonable potential to cause or contribute to exceedences of water quality objectives... In addition, because this limit is based on the secondary MCL level, again tied to taste, odor, or visual characteristics of drinking water at the tap, it is inappropriate. Finally, there is no explanation of the basis for imposition of this effluent limit as a daily maximum, which is inconsistent with appropriate procedure for application of drinking water standard-based limits.

Response:

Regional Board staff concurs with this comment and shall propose as a late change the removal of the effluent limitation for MTBE, as well as changing the language of the Order and Information Sheet to reflect the fact that MTBE does not have reasonable potential.

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Comment #9:

Ammonia

The Discharger commented that the Regional Board acted improperly by imposing numeric effluent limitations for ammonia in the Draft Permit and TSO through application of the Basin Plan's narrative toxicity objective, and that the Regional Board included specific effluent limits for ammonia based on the narrative toxicity objective without first identifying whether any of these substances are actually causing toxicity in the receiving waters. Instead, without an appropriate translation mechanism established in the Basin Plan or the requisite data, the Regional Board simply applied U.S. EPA 304(a) guidance criteria through the Basin Plan's narrative toxicity objective as the alleged numeric equivalent of that objective. This action ignores the express terms of the Basin Plan, and violates 40 C.F.R. section 131.11(a)(2) and Water Code section 13377.

Response:

Pursuant to 40 C.F.R. section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that “*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.*” [Emphasis added.] Section 122.44(d)(1)(vi) further provides that “[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.” With respect to narrative objectives, the Regional Board must establish effluent limitations that will attain and maintain the applicable narrative water quality criteria (40 CFR 122.44(d)(1) (vi) (A)). The federal regulations at 40 CFR section 122.44(d)(1)(vi) specify three options for how the state is to implement its narrative water quality objectives. Section 122.44(d)(1)(vi)(A) specifically allows the state to establish effluent limitations using an explicit state policy interpreting its narrative objectives. The Regional Board's Basin Plan contains an explicit state policy that interprets its narrative objectives. The implementation policy (“Policy for Application of Water Quality Objectives”) specifies, in part, that the Regional Board “will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives.” (Basin Plan, p. IV-17.00.) The Basin Plan contains narrative water quality objectives, including the narrative toxicity objective and the chemical constituent objective. The Permit includes effluent limitations based on these narrative objectives. The Regional Board complied with federal regulations and its Basin Plan in adopting the effluent limitations as explained in the Permit and Information Sheet.

The issue of a translator mechanism for adopting water quality-based effluent limitations (WQBELs) for narrative objectives has been addressed in other SWRCB Water Quality Orders including WQO 2002-0012 (East Bay Municipal Utility District, at page 7) which states: “EPA has also adopted a translator regulation that the Regional Board may properly use to develop numeric effluent limitations to implement narrative water quality objectives. Once a water quality standard has been promulgated, Clean Water Act section 301 requires all NPDES permits to incorporate discharge limitations to satisfy the standard. EPA promulgated 40 Code of Regulations section 122.44(d)(1)(vi) requiring permit writers to use one of three mechanisms to translate relevant

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narrative criteria into chemical-specific effluent limitations. “The regulation allowed permit writers to put in place new chemical-specific limitations through interpretation of existing narrative criteria until states had an opportunity to adopt specific numeric criteria...” (*American Paper Institute*, at page 353). The court in *American Paper Institute* found this method to be “a preeminent example of gap filling in the interest of a continuous and cohesive regulatory regime.” 40 Code of Regulations section 122.44(d) has been incorporated by reference into the state’s regulations. Thus, the “translator” in section 122.44(d) is a part of the state’s regulations and EPA concurs that nothing more is required of the Regional Board to comply with section 131.11.”

Comment #10:
Mercury

The Discharger commented that: “The California Toxic Rule objective for mercury used in determining the effluent limit for mercury was the “organism and drinking water” human health objective, corresponding to protection against levels that may be ingested in drinking water as well as fish tissue from the same water body... Imposition of effluent limits should be deferred, because data should be considered inadequate to determine reasonable potential and to calculate effluent limits. First, data are not sufficient to determine that “reasonable potential” has been demonstrated. All results for mercury were reported as “nondetect” except for one effluent sample and one receiving water sample. However, these were not measurements adequate to determine an MEC exceeding the CTR objective... The analytical laboratory reported 0.11 µg/L mercury as an estimated value (“J”) value, below the 0.2 µg/L laboratory reporting limit, in its analysis of the effluent sample collected on October 7, 2003.”

“The fact that the Draft Permit recognizes that data is insufficient for the calculation of interim limits in the Draft Permit further supports the conclusion that establishment of an effluent limit for mercury, if one is needed at all, should be deferred pending further monitoring and study. The Trust also requests that the Draft Permit maximum daily limit of 0.05 µg/L for mercury be reflected as a monthly average rather than a daily maximum, because the objective used is a human health-driven objective and warrants longer averaging periods.”

Response:

As noted in the SWRCB WQO 2002-0012 (East Bay Municipal Utility District at pages 27 and 28) analytical instruments have a range in which the presence of a chemical can be detected, but the amount cannot be accurately quantified. The lower value of this range is called the minimum detection level (MDL) in the SIP. The upper range is called the minimum level (ML), which is equivalent to the lower method calibration limit. J flag values are measurements that are lower than the lower method calibration limit. Laboratory methods have procedures for evaluating if a response is instrument noise or the presence of a chemical. Therefore, estimated values below the ML should not be taken to be non-detects. Although values recorded between the MDL and the ML should not be considered to be an accurate quantification, they can be used to evaluate reasonable potential. The reported estimated maximum effluent concentration value of 0.11 µg/L of mercury is two times

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greater than the criterion concentration, which Regional Board staff found warrants a finding of reasonable potential.

Regarding collection of additional data, at Section 2.1.1 the SIP states: “For bioaccumulative priority pollutants for which the receiving water has been included on the CWA Section 303(d) list, the RWQCB should consider whether the mass loading of the bioaccumulative pollutant(s) should be limited to representative, current levels pending TMDL development in order to implement the applicable water quality standard”. Since mercury is a bioaccumulative pollutant included on the CWA 303(d) list for the Delta, the intent of this Order is to include an interim performance based effluent limitation for mercury.

Mass based effluent limits are established to ensure representative, current levels of mercury in the discharge are maintained, and it is appropriate to gather additional information to ensure the limitation is representative of the current level of mercury mass in the discharge.

Concerning the expression of the effluent limitations, Regional Board staff concurs that the proposed Order effluent limitation for mercury should be applied as a monthly average rather than a daily maximum. Late changes to the Order will be proposed addressing this issue.

Comment # 11:
Hexavalent Chromium

The Discharger commented that imposition of effluent limits for hexavalent chromium should be deferred, because data should be considered inadequate to determine reasonable potential and to calculate effluent limits.

Response:

Water quality standards and chemical specific criteria were established in the USEPA’s California Toxics Rule (CTR) and National Toxics Rule (NTR). Protocols for implementing the CTR/NTR and assessing reasonable potential and establishing effluent limitations where required are provided by the SWRCB’s Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (known as the State Implementation Policy or SIP). These documents were the basis for assessing reasonable potential and establishing effluent limitations for the discharge.

The first of three triggers for determining reasonable potential in the SIP includes comparing the maximum effluent concentration (MEC) of the pollutant to the water quality objective. If the MEC exceeds the objective, as was the case for hexavalent chromium, a finding of reasonable potential is made, and effluent limitations are established.

Comment #12:
Copper, Lead, Zinc, Bis(2-ethylhexyl)phthalate, delta-BHC, 4,4’DDT, 4,4’DDE, 4,4’-DDD

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The Discharger commented that: “Before establishing effluent limits based on this ambient data, they recommend that the Regional Board remove the effluent limits for these constituents and allow the Trust to move its ambient monitoring location further downstream.”

Response:

The Regional Board staff established effluent limitations for these pollutants based upon monitoring data supplied by the Discharger. One of the three triggers for determining reasonable potential in the SIP includes comparing the observed maximum receiving water background concentration to the water quality objective. If the background concentration exceeds the objective, as was the case for these pollutants, then reasonable potential is found, and effluent limitations are established. The SWRCB has adopted revisions to this reasonable potential trigger in Section 1.3 step 6 of the SIP. This proposed Order includes a Provision which would allow the Order to be reopened, and effluent limitations for these pollutants removed, once these revisions to the SIP are approved by the Office of Administrative Law.

Comment #13:

Findings based on the evidence must be included to support permit requirements

The Discharger commented that: Orders not supported by the findings, or findings not supported by the evidence, constitute an abuse of discretion... In this case, the requirements contained in the Draft Permit and TSO are not supported by findings, or the findings are not supported by the evidence.

Response:

The opinion of Regional Board staff is that; the findings are supported by state and federal law and regulations as well as site specific factors including results of monitoring provided by the Discharger, and that the findings support the requirements in the proposed Orders.

Comment #14:

Groundwater Treatment Plant Startup Monitoring

The Discharger commented that the Groundwater Treatment Plant start-up monitoring requirements in the Monitoring and Reporting Program are excessive, because the system has been proven to reach operating equilibrium within a few minutes of operation.

Response:

Daily start-up monitoring requirements have been reduced from the first five days of operation, to the first three days of operation

Comment #15:

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Time Schedule Order (TSO)

The Discharger commented that compliance schedules are improperly included in the TSO instead of the draft permit, and that the TSO should include interim limits in accordance with Water Code Section 13385(j)(3) which secures exceptions to mandatory minimum penalties.

Response:

On 17 March 2005, a revised TSO was circulated for public review and comment. This revised TSO included interim performance-based effluent limitations. Staff notes that where the Regional Board determines that it is infeasible to achieve immediate compliance with an adopted water quality objective, the Board may establish in NPDES permits a schedule of compliance. However, schedules of compliance are only authorized for those water quality objectives adopted after September 1995. The Basin Plan chemical constituents and toxicity objectives were established prior to 1995; therefore although many of the effluent limitations in this proposed Order are new, they are based on existing numeric or narrative Basin Plan standards. The proposed Time Schedule Order provides compliance schedules for pollutants where effluent limitations are based on these existing numeric or narrative Basin Plan standards.

RESPONSE TO COMMENTS

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